CLAIMS

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is as follows:

1. A distributed system for decoding telecommunication tracer information originating from any telecommunication network element and utilizing any industry standard or proprietary telecommunication protocol, comprising:

a CDL based trace decoding software tool that executes on an application server that is deployed within a distributed network for decoding trace data provided by any telecommunication network element, wherein the trace data for a particular telecommunication network element is produced by a tracer and is comprised of a plurality of individual events utilizing one or more telecommunication protocols;

an encoder that creates and stores in a file system a plurality of executable CDL programs used to decode the trace data, any particular telecommunication protocol being defined by one or more said CDL programs;

a plurality of client workstations connected to the distributed network wherein each of the said workstations can access one or more application servers, each said application server having a CDL and signature based decoder engine that is capable of invoking one or more of said executable CDL programs to decode the trace data; and

a graphical user interface for each of said plurality of client workstations that receives an output from said CDL and signature based decoder engine and displays the decoded results in a consistent format across all said tracers whose trace data is decodable by said software tool.

2. The distributed system for decoding telecommunication tracer information of claim 1, said system having a plurality of application servers.

3. The distributed system for decoding telecommunications tracer information of claim 2, wherein said trace decoding software tool accommodates growth in said library of CDL encoded catalogs of telecommunications protocols.

4. The distributed system for decoding telecommunications tracer information of claim 2, wherein each of said plurality of client workstations can have concurrent access to the decoding services provided by a single application server, access concurrency being accomplished by reentrant code in said executable CDL programs.

5. The distributed system for decoding telecommunications tracer information of claim 2, wherein said trace decoding software tool provides context sensitive information for the plurality of events in said plurality of trace data.

6. The distributed system for decoding telecommunications tracer information of claim 2, wherein said trace decoding software tool is so deployed within a distributed computing network that multiple users, each working from a different one of said client workstations, is able to collaborate on the diagnosis of problems captured within tracer data from a particular network element.

7. The distributed system for decoding telecommunications tracer information of claim 2, wherein tracer diagnostics within a domain can be centrally administered from any client workstation that has access to all application servers that reside in the domain, said domain being supported by both the distributed network structure and the configuration of the said application servers.

8. A distributed and scalable system for collaborative decoding of telecommunications tracer information originating from a plurality of network elements on a network and using a plurality of telecommunications protocols, comprising:

an integrated trace analysis system (iTAS) application, said application containing one or more Catalog Definition Language (CDL) catalogs, each said protocol being defined by one or more CDL catalogs;

an iTAS relational database, said database being used to store said catalogs and provide said iTAS application with configuration parameters and administrative services;

one or more iTAS domains, each said domain further comprising one or more iTAS application servers having near identical iTAS data in their respective file systems and databases;

wherein said iTAS application has a CDL based decoder engine, said decoder engine being reentrant and wherein said iTAS application is deployed using distributed computing technology and using a client/server architecture.

9. A system as in claim 8, wherein trace decoded trace information is stored in said iTAS relational database for collaborative sharing between multiple users.